

## **Alem Truneh, Ph.D.**

Antigenics Inc., 3 Forbes Road, Lexington, MA 02421  
781-674-4420 (Work) 781-820-4030 (Mobile)  
atruneh@antigenics.com

### **CAREER PROFILE**

---

Senior pharmaceutical executive with 20 years of experience in pharmaceutical R&D. Vice President of research and development at Antigenics since 2001. Prior to Antigenics, 17 years of drug discovery and development experience at GlaxoSmithKline (& its heritage companies SB & SKB/SK&F) in several therapeutic areas, including inflammatory, autoimmune and allergic disorders, cancer, and infectious diseases. Helped advance several products, biologics, as well as small molecule drugs (NCEs/NMEs), from early discovery through advanced clinical trials & registration, and post-market product differentiation and PLEs. Served on senior level task forces, strategy teams and scientific and management committees.

Academic background includes Ph.D. in Biological Chemistry, and several years of research experiences in immunology, pharmacology and biochemistry. Academic appointments include Visiting Scientist and EMBO fellow (INSERM/CNRS, France), and associate professor of pharmacy at University of Marseille. Co-authored over 100 scientific papers and co-inventor on 24 issued or pending patents. Organized national and international scientific conferences, is a member of several scientific associations, serves on journal editorial boards and has won many scientific and management awards and honors.

### **PROFESSIONAL EXPERIENCE**

---

#### ***Antigenics***

***October 2001 - Present***

Vice President of R&D with responsibility for research and non-clinical development at Antigenics. Current pipeline includes an immunotherapeutic agent (Oncophage) in Phase III clinical development for treatment of cancer (RCC & melanoma), AG-858 an immunotherapeutic for CML, a liposomally formulated platinal (Aroplatin) in Phase II for colorectal cancer, a vaccine in development for treatment of HSV-2 infections, and other candidate products at various stages of non-clinical development.

At Antigenic, re-organized the research and pre-clinical development division of scientists and staff, derived from three heritage companies (Antigenics, Acquila & Aronex) on three locations, into a single, integrated and streamlined, matrix based structure, with immediate and positive impact on performance and productivity. As a member of the senior management team, progressed drug candidates through the discovery and development pipeline, helped prioritize projects, with emphasis in oncology and infectious diseases. Established academic collaborations, and obtained NIH SBIR grant funding for ID vaccine development. Managed programs including biologics and small molecule drugs for cancer and infectious diseases. Headed or served on various senior operational or advisory committees.

## **Alem Truneh, Ph.D.**

Antigenics Inc., 3 Forbes Road, Lexington, MA 02421  
781-674-4420 (Work) 781-820-4030 (Mobile)  
atrunch@antigenics.com

### **CAREER PROFILE**

---

Senior pharmaceutical executive with 20 years of experience in pharmaceutical R&D. Vice President of research and development at Antigenics since 2001. Prior to Antigenics, 17 years of drug discovery and development experience at GlaxoSmithKline (& its heritage companies SB & SKB/SK&F) in several therapeutic areas, including inflammatory, autoimmune and allergic disorders, cancer, and infectious diseases. Helped advance several products, biologics, as well as small molecule drugs (NCEs/NMEs), from early discovery through advanced clinical trials & registration, and post-market product differentiation and PLEs. Served on senior level task forces, strategy teams and scientific and management committees.

Academic background includes Ph.D. in Biological Chemistry, and several years of research experiences in immunology, pharmacology and biochemistry. Academic appointments include Visiting Scientist and EMBO fellow (INSERM/CNRS, France), and associate professor of pharmacy at University of Marseille. Co-authored over 100 scientific papers and co-inventor on 24 issued or pending patents. Organized national and international scientific conferences, is a member of several scientific associations, serves on journal editorial boards and has won many scientific and management awards and honors.

### **PROFESSIONAL EXPERIENCE**

---

#### ***Antigenics***

***October 2001 - Present***

Vice President of R&D with responsibility for research and non-clinical development at Antigenics. Current pipeline includes an immunotherapeutic agent (Oncophage) in Phase III clinical development for treatment of cancer (RCC & melanoma), AG-858 an immunotherapeutic for CML, a liposomally formulated platinal (Aroplatin) in Phase II for colorectal cancer, a vaccine in development for treatment of HSV-2 infections, and other candidate products at various stages of non-clinical development.

At Antigenic, re-organized the research and pre-clinical development division of scientists and staff, derived from three heritage companies (Antigenics, Aquila & Aronex) on three locations, into a single, integrated and streamlined, matrix based structure, with immediate and positive impact on performance and productivity. As a member of the senior management team, progressed drug candidates through the discovery and development pipeline, helped prioritize projects, with emphasis in oncology and infectious diseases. Established academic collaborations, and obtained NIH SBIR grant funding for ID vaccine development. Managed programs including biologics and small molecule drugs for cancer and infectious diseases. Headed or served on various senior operational or advisory committees.

Ruben EXHIBIT 2060  
Ruben v. Wiley et al.  
Interference No. 105,077  
RX 2060

**GlaxoSmithKline (Heritage Company: SmithKline Beecham Pharmaceuticals) 1984 - 2001**

Joined GlaxoSmithKline (formerly SmithKline Beecham & SmithKline Beckman) as junior level scientist and progressed to Director of Immunology with involvement in many areas of drug discovery and development. Highlights of accomplishment during this period at GSK & SB are listed below.

- As Director of Immunology, managed a department of 40 scientists and staff. Helped set scientific directions, developed disease strategies, managed budgets & resources, hired, trained and mentored personnel, and served on senior R&D management and scientific committees.
- Initiated several drug discovery efforts and led large multidisciplinary teams to advance these efforts from target identification through disease association studies, assay development, generation of potential therapeutic agents and *in vivo* evaluation, progressing them from early discovery through pre-clinical into clinical studies. Progressed 3 compounds into clinical trials and participated on 3 additional NCEs. Helped file over a dozen IND (US) and CTA/CTX (Europe) applications, provided pre-clinical support, including GLP studies, developed clinical surrogate endpoints/biomarkers, and helped with design of clinical trials and data interpretation and participated in regulatory (FDA) meetings. Helped design Market Aligned "development" Plans (MAPs) for drug candidates.
- Participated in product differentiation and PLE efforts.
- Served on publication strategy teams for compounds in clinical development.
- Co-led inter-company discovery efforts.
- Worked with Business Development to review in-licensing and collaborative opportunities (over 200), including participation in strategic reviews of external business opportunities in specific disease categories, participated in due diligence reviews and led scientific due diligence evaluations.
- Served on process improvement teams, working parties, high level task forces and inter-company steering committees, Strategic Initiatives (GPCRs, Chemokines, Novel TNF/TNFRs, etc), Inflammation Tissue Repair & Oncology - Disease Area Strategic Team (ITRO-DAST; covering autoimmunity, inflammation, osteoarthritis, osteoporosis and oncology with representation from Drug Discovery, Clinical Pharmacology, Clinical Development, Project Management, Business Development and Marketing).
- Established and managed several academic collaborations including sponsored/funded and unfunded projects.
- Helped develop and adopt new technologies in biology, including molecular and cellular, developed *in vivo* models in inflammation, immunology and oncology (e.g. DTH, SCID, MS, psoriasis, IBD, tumor and angiogenesis) and managed core facilities.
- Maintained scientific excellence and visibility through publication of over 70 manuscripts, submission of over 20 patent applications and organizing and/or participation (invited speaker and/or faculty, etc) in scientific meetings, membership of professional societies and associate editorship of scientific journals.

Overall experience gained at GSK/SB includes: drug discovery and development skills with experience in *in vitro* and *in vivo* cellular & molecular biology, increased practical and

theoretical experience in immuno, cell and tumor biology, better understanding of disease processes such as inflammation, autoimmunity, allergic, pulmonary and bone disorders, cancer, HIV/AIDS, experience in small molecule drugs/compounds as well as protein drugs; exposure to strategic, regulatory, business, marketing and legal issues relating to drug discovery and development; leadership of multi-disciplinary teams, and personnel and resource management.

***Associate Professor of Pharmacy***

***Faculté de Pharmacie, Université de la Méditerranée - Aix Marseille II - France 1984***

This French Ministry of Education appointment involved both teaching and university funded research with own lab, students and technicians.

***EMBO Fellow & Visiting Scientist - INSERM/CNRS - France***

***Jan 1982 – Dec 1983***

As an EMBO fellow and Visiting Scientist at the Centre d'Immunologie - INSERM / CNRS in Luminy, France, conducted research in immunology, resulting in 12 scientific publications in prestigious international journals and filing of one patent application. The topics covered in these publications included i) endocytosis and recycling of MHC molecules, ii) activation of and signaling in T cells, iii) adhesion molecules on T and B cells, iv) use of antibody-conjugated drug encapsulating liposomes to kill and/or rescue specific tumor cells and to study cell biology.

***Dissertation Research - University of London - UK***

***1978 - 1981***

As a graduate student at University College - University of London, conducted research under the supervision of Dr. F. L. Pierce, on the immunobiology and pharmacology of mast cells and basophils and their role in allergic disorder and asthma. Studied the processes that sensitized these cells and led to hypersensitivity reactions, signal transduction mechanisms and the role of calcium during their activation, degranulation and release of inflammatory mediators, pharmacological regulation by anti-allergic drugs, and the mechanism of action of these drugs. This research led to the publication of 12 papers including a publication in Nature, and to a Ph.D. degree in Biological Chemistry from the University of London in 1981.

## **EDUCATION**

---

**Ph.D., Biological Chemistry - 1978-1981**

Department of Chemistry, University of London (University College), London, U.K.

**B.Sc. (Hons) Biochemistry - 1973-1976**

Dept. of Biochemistry, University of London (Queen Elizabeth/Bedford College), London, U.K.

## **ASSOCIATIONS & HONORS**

---

**Current and Past Membership**

- Society for Leukocyte Biology (1999 - Present)
- Inflammation Research Association (1996 – Present)
- American Association of Immunologists (1986 - Present)
- Society for Analytical Cytology (1984 - 1997)
- American Association for the Advancement of Sciences (1986 - 1996)

- New York Academy of Sciences (1985 - 1996)
- British Biochemical Society (1979 - 1988)
- British Society for Immunology (1980 - 1987)
- British Society for Cell Biology (1980 - 1982)

**Associate Editor:** Current Molecular Medicine

**Fellowships, Honors and Awards**

- INSERM, Visiting Scientist (1983)
- EMBO Fellow (1982-83)
- World University Service Scholar (1978-81, U.K.)
- British Council Scholarship (1973-76)
- Invited Faculty for NATO Advanced Courses in Flow Cytometry (Paris-1984, 1985, 1988, 1992, 1995; Hershey, PA-1985, Philadelphia, 1986)
- Invited speaker in a number of National and International Scientific Meetings
- Animal Welfare Award (given by R&D Chairman), SmithKline Beecham - 1996
- Impact Award, Clenoliximab (CD4 mAb) Project Team Leader, SmithKline Beecham - 1998
- Simply the Best Award (given by R&D Chairman), 7TM (GPCR) Strategic Initiative Team, SmithKline Beecham - 2000

**PUBLICATIONS & PATENTS**

---

**Publications:**

- 102 refereed articles and reviews
- Over 120 abstracts

**Patents (issued or pending):**

- 24 patents
- 17 issued, 7 applications pending

## Publications

1. Kensil, C., Read, A.X. Mo, and A. Truneh, *Current vaccine adjuvants: An overview of a diverse class*. *Frontiers in Bioscience*, 2004. 9: p. 2972-2988.
2. Morel, Y., Truneh, A., Costello, R. T., and Olive, D., *LIGHT, a new TNF superfamily member, is essential for memory T helper cell-mediated activation of dendritic cells*. *Eur J Immunol*, 2003. 33(11): 3213-9.
3. Federici, M. M., Venkat, K., Bam, N., Patel, K., Dal Monte, P. R., Fernie, B., Hensley, P., Carr, S., Baldoni, J., Truneh, A., and Erickson, J., *Detection and consequences of recombinant protein isoforms: implications for biological potency*. *Dev Biol (Basel)*, 2003. 113: 53-7; discussion 113-4.
4. Costello, R. T., Mallet, F., Barbarat, B., Schiano De Colella, J. M., Sainty, D., Sweet, R. W., Truneh, A., and Olive, D., *Stimulation of non-Hodgkin's lymphoma via HVEM: an alternate and safe way to increase Fas-induced apoptosis and improve tumor immunogenicity*. *Leukemia*, 2003. 17(12): 2500-7.
5. Mason, U., Aldrich, J., Breedveld, F., Davis, C. B., Elliott, M., Jackson, M., Jorgensen, C., Keystone, E., Levy, R., Tesser, J., Totoritis, M., Truneh, A., Weisman, M., Wiesenhuber, C., Yocum, D., and Zhu, J., *CD4 coating, but not CD4 depletion, is a predictor of efficacy with primatized monoclonal anti-CD4 treatment of active rheumatoid arthritis*. *J Rheumatol*, 2002. 29(2): 220-9.
6. Davenport, C. M., McAdams, H. A., Kou, J., Mascioli, K., Eichman, C., Healy, L., Peterson, J., Murphy, S., Coppola, D., and Truneh, A., *Inhibition of pro-inflammatory cytokine generation by CTLA4-Ig in the skin and colon of mice adoptively transplanted with CD45RBhi CD4+ T cells correlates with suppression of psoriasis and colitis*. *Int Immunopharmacol*, 2002. 2(5): 653-72.
7. Newman, R., Hariharan, K., Reff, M., Anderson, D. R., Braslawsky, G., Santoro, D., Hanna, N., Bugelski, P. J., Brigham-Burke, M., Crysler, C., Gagnon, R. C., Dal Monte, P., Doyle, M. L., Hensley, P. C., Reddy, M. P., Sweet, R. W., and Truneh, A., *Modification of the Fc region of a primatized IgG antibody to human CD4 retains its ability to modulate CD4 receptors but does not deplete CD4(+) T cells in chimpanzees*. *Clin Immunol*, 2001. 98(2): 164-74.
8. Morel, Y., Truneh, A., Sweet, R. W., Olive, D., and Costello, R. T., *The TNF superfamily members LIGHT and CD154 (CD40 ligand) costimulate induction of dendritic cell maturation and elicit specific CTL activity*. *J Immunol*, 2001. 167(5): 2479-86.
9. Fishman-Lobell, J., Tsui, P., Reddy, M., DiPrinzio, R., Eichman, C., Sweet, R. W., and Truneh, A., *CD4 mAb induced apoptosis of peripheral T cells: multiparameter subpopulation analysis by flow cytometry using Attractors*. *J Immunol Methods*, 2001. 257(1-2): 71-82.
10. R. W. Sweet and A. Truneh. *CD4* (Invited Review). *Encyclopedia of Molecular Medicine*, John Wiley & Sons, Inc. (Editor), 2001.

11. Davenport, C.M., A. Truneh. *The Role of Cytokines in Inflammatory Bowel Disease and Prospects for Cytokine Directed Therapy*. Submitted.
12. Davenport, C.M., A. Truneh. *Interleukin-2 knockout mice as a model for inflammatory bowel disease and evaluation of potential therapeutic agents*. Submitted.
13. Deen, K.C., Griego, S.D., Silverman, C.S., Davis, C.B., Truneh, A., and Sweet, R.W. *Monobody: a Monovalent Antibody with Favorable Pharmacokinetics In Vivo*, Submitted.
14. M. Reddy, K. Melnick, C. Kinney, C. Eichman, R. DiPrinzio, R. Sweet, and A. Truneh. *Expression of TRAIL and its receptors on freshly isolated lymphoid, myeloid cells and cell lines and implication for function*. *Leucocyte Typing VII*, In press.
15. M. Reddy, K. Melnick, C. Eichman, R. DiPrinzio, and A. Truneh. *T cell panel antigens on activated and non-activated T lymphocytes and monocytes and effects of mAbs on MLR*. *Leucocyte Typing VII*, In press.
16. Doyle, M. L., Brigham-Burke, M., Blackburn, M. N., Brooks, I. S., Smith, T. M., Newman, R., Reff, M., Stafford, W. F., 3rd, Sweet, R. W., Truneh, A., Hensley, P., & O'Shannessy, D. J. (2000). *Measurement of protein interaction bioenergetics: application to structural variants of anti-sCD4 antibody*. *Methods in Enzymology*, **323**: 207-30.
17. Morel, Y., Schiano De Colella, J. M., Harrop, J., Deen, K. C., Holmes, S. D., Wattam, T. A., Khandekar, S. S., Truneh, A., Sweet, R. W., Gastaut, J. A., Olive, D., & Costello, R. T. (2000). *Reciprocal expression of the TNF family receptor herpes virus entry mediator and its ligand LIGHT on activated T cells: LIGHT down-regulates its own receptor*. *J Immunol*, **165**: 4397-404.
18. Truneh, A., Sharma, S., Silverman, C., Khandekar, S., Reddy, M. P., Deen, K. C., McLaughlin, M. M., Srinivasula, S. M., Livi, G. P., Marshall, L. A., Alnemri, E. S., Williams, W. V., and Doyle, M. L. *Temperature-sensitive differential affinity of TRAIL for its receptors. DR5 is the highest affinity receptor*. *J Biol Chem* **275**, 23319-25 (2000).
19. P. J. Bugelski, D. J. Herzyk, S. Rehm, A. G. Harmsen, E. V. Gore, D. M. Williams, B. E. Maleeff, A. M. Badger, A. Truneh, S. R. O'Brien, R. A. Macia, P. J. Wier, D. G. Morgan and T. K. Hart. (2000) *Preclinical Development of Keliximab, a PRIMATIZED™ Anti-CD4 Monoclonal Antibody, in Human CD4 Transgenic Mice: Characterization of the Model and Safety Studies*. *Human and Experimental Toxicology*, **19**(4): 230-243.
20. Podolin, P. L., Webb, E. F., Reddy, M., Truneh, A., & Griswold, D. E. (2000). *Inhibition of contact sensitivity in human CD4+ transgenic mice by human CD4-specific monoclonal antibodies: CD4+ T-cell depletion is not required*. *Immunology*, **99**: 287-95.
21. Reddy, M. P., Kinney, C. A., Chaikin, M. A., Payne, A., Fishman-Lobell, J., Tsui, P., Dal Monte, P. R., Doyle, M. L., Brigham-Burke, M. R., Anderson, D., Reff, M., Newman, R., Hanna, N., Sweet, R. W., & Truneh, A. (2000). *Elimination of Fc receptor-dependent effector functions of a modified IgG4 monoclonal antibody to human CD4*. *Journal of Immunology*, **164**: 1925-33.
22. Chirmule, N., Xiao, W. D., Truneh, A., Schnell, M. A., Hughes, J. V., Zoltick, P., & Wilson, J. M. (2000). *Humoral immunity to adeno-associated virus type 2 vectors*

following administration to murine and nonhuman primate muscle. Journal of Virology, 74: 2420-2425.

23. Chirmule, N., Truneh, A., Haecker, S. E., Tazelaar, J., Gao, G. P., Raper, S. E., Hughes, J. V., & Wilson, J. M. (1999). *Repeated administration of adenoviral vectors in lungs of human CD4 transgenic mice treated with a nondepleting CD4 antibody*. Journal of Immunology, 163: 448-455.
24. Harrop, J. A., McDonnell, P. C., Brighamburke, M., Lyn, S. D., Minton, J., Tan, K. B., Dede, K., Spampanato, J., Silverman, C., Hensley, P., Diprinzio, R., Emery, J. G., Deen, K., Eichman, C., Chabotfletcher, M., Truneh, A., & Young, P. R. (1998). *Herpesvirus Entry Mediator Ligand (HVEM-L), a Novel Ligand for HVEM/TR2, Stimulates Proliferation of T Cells and Inhibits HT29 Cell Growth*. Journal of Biological Chemistry, 273: 27548-27556.
25. Harrop, J. A., Reddy, M., Dede, K., Brigham-Burke, M., Lyn, S., Tan, K. B., Silverman, C., Eichman, C., DiPrinzio, R., Spampanato, J., Porter, T., Holmes, S., Young, P. and Truneh, A. (1998). *Antibodies to TR2 (HVEM), a new member of the TNFR superfamily, block T cell proliferation, expression of activation markers and production of cytokines*. Journal of Immunology, 161: 1786-1794.
26. Harrop, J., Spampanato, J., Reddy, M., Eichman, C., Diprinzio, R., Cook, R. M., Truneh, A. (1998). *Kinetics of expression of TNFR superfamily molecules & other cytokine receptors on activated CD4+ T cells*. Leukocyte Typing VI. (pp. 871-873), Garland Publishing Inc.
27. Tan, K. B., Harrop, J., Reddy, M., Young, P., Terrett, J., Emery, J., Moore, G., & Truneh, A. (1997). *Characterization of a novel TNF-like ligand and recently described TNF ligand and TNF receptor superfamily genes and their constitutive and inducible expression in hematopoietic and non-hematopoietic cells*. Gene, 20: 35-46.
28. Kwon, B. S., Tan, K. B., Ni, J., Lee, K. O., Kim, K. K., Kim, Y. J., Wang, S., Gentz, R., Yu, G. L., Harrop, J., Lyn, S. D., Silverman, C., Porter, T. G., Truneh, A., & Young, P. R. (1997). *A newly identified member of the tumor necrosis factor receptor superfamily with a wide tissue distribution and involvement in lymphocyte activation*. Journal of Biological Chemistry, 272: 14272-6.
29. Sung, C. P., Arleth, A. J., Eichman, C., Truneh, A., & Ohlstein, E. H. (1997). *Carvedilol, a multiple-action neurohumoral antagonist, inhibits mitogen-activated protein kinase and cell cycle progression in vascular smooth muscle cells*. Journal of Pharmacology & Experimental Therapeutics, 283: 910-7.
30. Anderson, D., Chambers, K., Hanna, N., Leonard, J., Reff, M., Newman, R., Baldoni, J., Dunleavy, D., Reddy, M., Sweet, R., & Truneh, A. (1997). *A primatized MAb to human CD4 causes receptor modulation, without marked reduction in CD4+ T cells in chimpanzees: in vitro and in vivo characterization of a mAb (IDEC-CE9.1) to human CD4*. Clinical Immunology & Immunopathology, 84: 73-84.
31. Pages, F., Ragueneau, M., Klasen, S., Battifora, M., Couez, D., Sweet, R., Truneh, A., Ward, S. G., & Olive, D. (1996). *Two distinct intracytoplasmic regions of the T-cell adhesion molecule CD28 participate in phosphatidylinositol 3-kinase association*. Journal of Biological Chemistry, 271: 9403-9.



32. Nunes, J. A., Truneh, A., Olive, D., & Cantrell, D. A. (1996). *Signal transduction by CD28 costimulatory receptor on T cells. B7-1 and B7-2 regulation of tyrosine kinase adaptor molecules.* Journal of Biological Chemistry, **271**: 1591-8.
33. Nunes, J. A., Battifora, M., Woodgett, J. R., Truneh, A., Olive, D., & Cantrell, D. A. (1996). *CD28 signal transduction pathways. A comparison of B7-1 and B7-2 regulation of the map kinases: ERK2 and Jun kinases.* Molecular Immunology, **33**: 63-70.
34. Kariv, I., Truneh, A., & Sweet, R. W. (1996). *Analysis of the site of interaction of CD28 with its counter-receptors CD80 and CD86 and correlation with function.* Journal of Immunology, **157**: 29-38.
35. Truneh, A., Reddy, M., Ryan, P., Lyn, S. D., Eichman, C., Couez, D., Hurle, M. R., Sekaly, R. P., Olive, D., & Sweet, R. (1996). *Differential recognition by CD28 of its cognate counter receptors CD80 (B7.1) and B70 (B7.2): analysis by site directed mutagenesis.* Molecular Immunology, **33**: 321-34.
36. Ghiotto-Ragueneau, M., Battifora, M., Truneh, A., Waterfield, M. D., & Olive, D. (1996). *Comparison of CD28-B7.1 and B7.2 functional interaction in resting human T cells: phosphatidylinositol 3-kinase association to CD28 and cytokine production.* European Journal of Immunology, **26**: 34-41.
37. Okafo, G. N., Burrow, L. M., Neville, W., Truneh, A., Smith, R. A. G., Reff, M., & Camilleri, P. (1996). *Simple Differentiation Between Core-Fucosylated and Nonfucosylated Glycans By Capillary Electrophoresis.* Analytical Biochemistry, **240**: 68-74.
38. Hart, T. K., Truneh, A., & Bugelski, P. J. (1996). *Characterization of CD4-gp120 Activation Intermediates During Human Immunodeficiency Virus Type 1 Syncytium Formation.* AIDS Research & Human Retroviruses, **12**: 1305-1313.
39. Truneh, A., Reddy, M., Ryan, P., Lyn, S., Kariv, I., Eichman, C., Couez, D., Hurle, M., Sekaly, R.-P., Olive, D. and Sweet, R. (1996) *Analysis of CD28 Interactions with its cognate counter-receptors CD80 and CD86.* In: A. Jacquemin-Sablon (Ed.) Flow and Imaging Cytometry (pp3-19), NATO ASI Series, Cell Biology, Vol. 95.
40. Patil Ashok, D., Kumar, N. V. A. S. A. N. T., Kokke Wilhelmus, C., Bean Mark, F., Freyer Alan, J., Brosse Charles, D. E., Mai, S. H. I. N. G., Truneh, A. L. E. M. S. E. G. E. D., Carte, B. R. A. D., & et al. (1995). *Novel Alkaloids from the Sponge Batzella Sp. Inhibitors of HIV-gp120-Human Cd4 Binding.* J. Org. Chem., **60**: 1182-8.
41. Fargeas, C. A., Truneh, A., Reddy, M., Hurle, M., Sweet, R., & Sekaly, R. P. (1995). *Identification of residues in the V domain of CD80 (B7-1) implicated in functional interactions with CD28 and CTLA4.* Journal of Experimental Medicine, **182**: 667-75.
42. Truneh, A., Reddy, M., Couez, D., Kokolis, C., Eichman, C., Fargeas, C., Sekaly, R., Sweet, R., & Olive, D. (1995). *Analysis of CD28- and B7-mediated T cell adhesion and IL-2 production using a panel of mAbs and CTLA4-Ig and B7-Ig.* In S. F. Schlossman et. al. (Eds.) Leucocyte Typing V (pp370-372). Oxford University Press.
43. Patil, A. D., Kumar, N. V., Kokke, W. C., Bean, M. F., Freyer, A. J., Brosse, C. D., Mai, S., Truneh, A., Carte, B., Breen, A. L., Hertzberg, R. P., Johnson, R. K., Westley, J. W., & Potts, B. C. (1995). *Novel Alkaloids from the Sponge Batzella sp.: Inhibitors of HIV gp120-Human CD4 Binding.* Journal of Organic Chemistry, **60**: 1182-8.

44. Ryu, S. E., Truneh, A., Sweet, R. W., & Hendrickson, W. A. (1994). *Structures of an HIV and MHC binding fragment from human CD4 as refined in two crystal lattices.* Structure, **2**: 59-74.
45. Reddy, M. P., Webb, E. F., Cassatt, D., Maley, D., Lee, J. C., Griswold, D. E., & Truneh, A. (1994). *Pyridinyl imidazoles inhibit the inflammatory phase of delayed type hypersensitivity reactions without affecting T-dependent immune responses.* International Journal of Immunopharmacology, **16**: 795-804.
46. Pages, F., Ragueneau, M., Rottapel, R., Truneh, A., Nunes, J., Imbert, J., & Olive, D. (1994). *Binding of phosphatidylinositol-3-OH kinase to CD28 is required for T-cell signalling.* Nature, **369**: 327-9.
47. Olive, D., Pages, F., Klasen, S., Battifora, M., Costello, R., Nunes, J., Truneh, A., Ragueneau, M., Martin, Y., Imbert, J., Birg, F., Mawas, C., Bagnasco, M., & Cerdan, C. (1994). *Stimulation via the CD28 molecule – Regulation of signalling, cytokine production and cytokine receptor expression [Review].* Fundamental & Clinical Immunology, **2**: 185-197.
48. Nunes, J. A., Collette, Y., Truneh, A., Olive, D., & Cantrell, D. A. (1994). *The role of p21ras in CD28 signal transduction: triggering of CD28 with antibodies, but not the ligand B7-1, activates p21ras.* Journal of Experimental Medicine, **180**: 1067-76.
49. Couez, D., Pages, F., Ragueneau, M., Nunes, J., Klasen, S., Mawas, C., Truneh, A., & Olive, D. (1994). *Functional expression of human CD28 in murine T cell hybridomas.* Molecular Immunology, **31**: 47-57.
50. Pearce, F. L., Ennis, M., Truneh, A., & White, J. R. (1994). *Role of intra- and extracellular calcium in histamine release from rat peritoneal mast cells. 1981 [classical article].* Agents & Actions, **43**: 144-7; discussion 148.
51. Yakubov, L., Khaled, Z., Zhang, L. M., Truneh, A., Vlassov, V., & Stein, C. A. (1993). *Oligodeoxynucleotides interact with recombinant CD4 at multiple sites.* Journal of Biological Chemistry, **268**: 18818-23.
52. Prabhakar, U., Lipshutz, D., & Truneh, A. (1993). *Inhibition of CD44, CD45 and LFA-3 mediated cytokine release from human monocytes by SK&F 86002 and pentoxifylline.* International Journal of Immunopharmacology, **15**: 205-9.
53. Lee, J. C., Badger, A. M., Griswold, D. E., Dunnington, D., Truneh, A., Votta, B., White, J. R., Young, P. R., & Bender, P. E. (1993). *Bicyclic imidazoles as a novel class of cytokine biosynthesis inhibitors. [Review].* Annals of the New York Academy of Sciences, **696**: 149-70.
54. Jarvest, R. L., Breen, A. L., Edge, C. M., Chaikin, M. A., Jennings, L. J., Truneh, A., Sweet, R. W., & Hertzberg, R. P. (1993). *Structure-directed discovery of an inhibitor of the binding of HIV gp120 to the CD4 receptor.* Bioorganic & Medicinal Chemistry Letters, **3**: 2851-2856.
55. Robinet, E., Ibrahim, A., Truneh, A., Ostronoff, M., Mishal, Z., Zambon, E., Gay, F., Hayat, M., Pico, J. L., & Chouaib, S. (1992). *Serum levels and receptor expression of tumor necrosis factor-alpha following human allogeneic and autologous bone marrow transplantation.* Transplantation, **53**: 574-9.

56. Truneh, A., Buck, D., Cassatt, D. R., Juszczak, R., Kassis, S., Ryu, S. E., Healey, D., Sweet, R., & Sattentau, Q. (1991). *A region in domain 1 of CD4 distinct from the primary gp120 binding site is involved in HIV infection and virus-mediated fusion.* Journal of Biological Chemistry, 266: 5942-8.
57. Sweet, R., Truneh, A., & Hendrickson, W. (1991). *CD4: its structure, role in immune function and AIDS pathogenesis, and potential as pharmacological target.* Current Opinion in Biotechnology, 2: 622-633.
58. Juszczak, R. J., Turchin, H., Truneh, A., Culp, J., & Kassis, S. (1991). *Effect of human immunodeficiency virus gp120 glycoprotein on the association of the protein tyrosine kinase p56lck with CD4 in human T lymphocytes.* Journal of Biological Chemistry, 266: 11176-83.
59. Healey, D. G., Dianda, L., Buck, D., Schroeder, K., Truneh, A., Sattentau, Q. J., & Beverley, P. C. (1991). *A highly selected panel of anti-CD4 antibodies fails to induce anti-idiotypic antisera mediating human immunodeficiency virus neutralization.* European Journal of Immunology, 21: 1491-8.
60. Cassatt, D. R., Sweet, R. W., Arthos, J. A., & Truneh, A. (1991). *Immunization with soluble murine CD4 induces an anti-self antibody response without causing impairment of immune function.* Journal of Immunology, 147: 1470-6.
61. Bugelski, P. J., Thiem, P. A., Truneh, A., & Morgan, D. G. (1991). *Recombinant human soluble CD4 does not inhibit immune function in cynomolgus monkeys.* Toxicologic Pathology, 19: 580-8.
62. Truneh, A., Frescatore, R. L., Thiem, P., Leary, J. J., Rosenberg, M., Hanna, N., Sweet, R., & Bugelski, P. J. (1990). *Humoral response of cynomolgus macaques to human soluble CD4: antibody reactivity restricted to xeno-human determinants.* Cellular Immunology, 131: 98-108.
63. Sweet, R., Arthos, J., Deen, K., Chaikin, M. A., Fornwald, J. A., Sathe, G. M., Truneh, A., Rosenberg, M., Sattentau, Q. J., Clapham, P. R., Weiss, R. A., McDougal, J. S., Pietropaolo, C., Maddon, P. J., & Axel, R. (1990). *Recognition of CD4 by the AIDS virus: Inhibition by soluble CD4 and analysis of the virus binding site.* In R. E. Stobaugh (Eds.), Frontiers of Chemistry: Biotechnology (pp. 151-167). Columbus, Ohio: Chemical Abstracts Service.
64. Sattentau, Q., Truneh, A., Arthos, J., Healey, D., Sternberg, M. J. E., Beverley, P. C. L., & Sweet, R. (1990). *Idiotypic vaccines for HIV based on CD4 antibodies.* In A. D. M. E. Osterhaus & F. G. C. M. UytdeHaag (Eds.), Idiotypic Networks in Biology and Medicine (pp. 279-275). Elsevier Science Publishers.
65. Ryu, S. E., Kwong, P. D., Truneh, A., Porter, T. G., Arthos, J., Rosenberg, M., Dai, X. P., Xuong, N. H., Axel, R., Sweet, R. W., & et, a. l. (1990). *Crystal structure of an HIV-binding recombinant fragment of human CD4 [see comments].* Nature, 348: 419-26.
66. Bhatnagar, P. K., Busch, M., Huffman, W. F., Silvestri, J., Truneh, A., Ulrich, P., & Vyas, G. N. (1990). *Delineation of the binding regions of CD4 for HIV and HLA class II antigens.* In J. E. Rivier & G. R. Marshal (Eds.), Proceedings of the XXIIth American Peptide Symposium (pp. 849-851).

67. Arthos, J., Deen, K. C., Shatzman, A., Truneh, A., Rosenberg, M., & Sweet, R. W. (1990). *The genetic analysis of the HIV envelope binding domain on CD4*. Annals of the New York Academy of Sciences, **616**: 116-24.
68. Arthos, J., Deen, K., Chaikin, M. A., Fornwald, J., Sathe, G., Clapham, P., Weiss, R., McDougal, J. S., Pietropaolo, C., Maddon, P. J., Truneh, A., Axel, R., & Sweet, R. (1990). *Analysis of the HIV envelope binding domain on CD4 through site-directed mutagenesis*. In Human Retroviruses. UCLA Symposium on Molecular and Cellular Biology, New Series (pp. 171-179). New York: Alan R. Liss Inc.
69. Sattentau, Q. J., Arthos, J., Deen, K., Hanna, N., Healey, D., Beverley, P. C., Sweet, R., & Truneh, A. (1989). *Structural analysis of the human immunodeficiency virus-binding domain of CD4. Epitope mapping with site-directed mutants and anti-idiotypes*. Journal of Experimental Medicine, **170**: 1319-34.
70. Machy, P., & Truneh, A. (1989). *Differential half-life of major histocompatibility complex encoded class I molecules in T and B lymphoblasts*. Molecular Immunology, **26**: 687-96.
71. Arthos, J., Deen, K., Chaikin, M., Fornwald, J., Sathe, G., Sattentau, Q., Clapham, P. R., Weiss, R., McDougal, J. S., Pietropaolo, C., Axel, R., Truneh, A., Maddon, P. J., & Sweet, R. (1989). *Identification of the residues in human CD4 critical for the binding of HIV*. Cell, **57**: 469-481.
72. Lee, J. C., Truneh, A., Smith, M. F., Chen, M.-J., & Tsang, K. Y. (1988). *Induction of IL-2 receptor expression by interleukin-1 and tumor necrosis factor on YT cells*. In M. C. Powanda, J. J. Oppenheim, M. J. Kluger, & C. A. Dinarello (Eds.), Progress in Leukocyte Biology: Monokines and other non-lymphocytic cytokines (pp. 273-280).
73. Truneh, A., Machy, P., & Horan, P. K. (1987). *Antibody-bearing liposomes as multicolor immunofluorescence markers for flow cytometry and imaging*. Journal of Immunological Methods, **100**: 59-71.
74. Truneh, A., & Machy, P. (1987). *Detection of very low receptor numbers on cells by flow cytometry using a sensitive staining method*. Cytometry, **8**: 562-7.
75. Machy, P., Truneh, A., Gennaro, D., & Hoffstein, S. (1987). *Major histocompatibility complex class I molecules internalized via coated pits in T lymphocytes*. Nature, **328**: 724-6.
76. Machy, P., Truneh, A., Gennaro, D., & Hoffstein, S. (1987). *Endocytosis and de novo expression of major histocompatibility complex encoded class I molecules: kinetic and ultrastructural studies*. European Journal of Cell Biology, **45**: 126-36.
77. Lee, J. C., Truneh, A., Smith, M. F. J., & Tsang, K. Y. (1987). *Induction of interleukin 2 receptor (TAC) by tumor necrosis factor in YT cells*. Journal of Immunology, **139**: 1935-8.
78. Truneh, A., Simon, P., & Schmitt, V. A. M. (1986). *Interleukin 1 and protein kinase C activator are dissimilar in their effects on IL-2 receptor expression and IL-2 secretion by T lymphocytes*. Cellular Immunology, **103**: 365-74.
79. Aragnol, D., Bayard, B., Lebleu, B., Machy, P., Piron, M.-A., Truneh, A., Victorero, G., & Leserman, L. D. (1986). *Antibody-targeted liposomes as tools in cell biology and*

pharmacology. In K. Yagi (Eds.), Medical Application of Liposomes (pp. 151-154). Tokyo: Japanese Scientific Societies Press.

80. van Agthoven, A. J., & Truneh, A. (1985). *Lymphocyte function-associated antigens one (LFA-1) on B and on T lymphocytes bind a monoclonal antibody with different affinities.* Cellular Immunology, 91: 255-62.
81. Truneh, A., Albert, F., Golstein, P., & Schmitt, V. A. M. (1985). *Calcium ionophore plus phorbol ester can substitute for antigen in the induction of cytolytic T lymphocytes from specifically primed precursors.* Journal of Immunology, 135: 2262-7.
82. Truneh, A., Albert, F., Golstein, P., & Schmitt, V. A. M. (1985). *Early steps of lymphocyte activation bypassed by synergy between calcium ionophores and phorbol ester.* Nature, 313: 318-20.
83. Leserman, L. D., Machy, P., Truneh, A., & Zuniga, M. (1985). *Endocytosis of MHC molecules evaluated by specifically targeted liposomes.* In B. Pernis & H. H. Voge (Eds.), Cell Biology of the Major Histocompatibility Complex (pp. 73-79). New York: Academic Press.
84. Leoutsakos, A., Truneh, A., & Pearce, F. L. (1985). *Role of cyclic AMP in the induction of histamine secretion from mast cells.* Agents & Actions, 16: 126-8.
85. Albert, F., Hua, C., Truneh, A., Pierres, M., & Schmitt, V. A. M. (1985). *Distinction between antigen receptor and IL 2 receptor triggering events in the activation of alloreactive T cell clones with calcium ionophore and phorbol ester.* Journal of Immunology, 134: 3649-55.
86. Truneh, A., & Pearce, F. L. (1984). *Effect of cyclic AMP, disodium cromoglycate and other anti-allergic drugs on histamine secretion from rat mast cells stimulated with the calcium ionophore ionomycin.* Agents & Actions, 14: 179-84.
87. Truneh, A., Mishal, Z., & Leserman, L. D. (1984). *A calmodulin antagonist increases the apparent rate of endocytosis of liposomes bound to MHC molecules via monoclonal antibodies.* Experimental Cell Research, 155: 50-63.
88. Leserman, L. D., Aragnol, D., Barbet, J., Machy, P., & Truneh, A. (1984). *Antibody-bearing liposomes as probes of receptor-mediated endocytosis.* In G. Gregoriadis (Eds.), Receptor mediated targeting of drugs (pp. 393-406). Plenum Press.
89. Barbet, J., Machy, P., Truneh, A., & Leserman, L. D. (1984). *Weak acid-induced release of liposome-encapsulated carboxyfluorescein.* Biochimica et Biophysica Acta, 772: 347-56.
90. Truneh, A., Mishal, Z., Barbet, J., Machy, P., & Leserman, L. D. (1983). *Endocytosis of liposomes bound to cell surface proteins measured by flow cytofluorometry.* Biochemical Journal, 214: 189-94.
91. Truneh, A., Machy, P., Barbet, J., Mishal, Z., Lemonnier, F. A., & Leserman, L. D. (1983). *Endocytosis of HLA and H-2 molecules on transformed murine cells measured by fluorescence dequenching of liposome-encapsulated carboxyfluorescein.* EMBO Journal, 2: 2285-91.

92. Pearce, F. L., Clements, J., Ennis, M., Peachell, P. T., Truneh, A., & White, J. R. (1983). *Do anti-allergic agents prevent histamine release from mast cells by acting on receptor-mediated calcium channels?* Monographs in Allergy, 18: 220-2.
93. Truneh, A., White, J. R., & Pearce, F. L. (1982). *Effect of ketotifen and oxatomide on histamine secretion from mast cells.* Agents & Actions, 12: 206-9.
94. Truneh, A., Ennis, M., & Pearce, F. L. (1982). *Some characteristics of histamine secretion from mast cells treated with ionomycin.* International Archives of Allergy & Applied Immunology, 69: 86-8.
95. Truneh, A., & Pearce, F. L. (1981). *Effect of anti-allergic compounds on histamine release from rat peritoneal mast cells treated with concanavalin A.* International Archives of Allergy & Applied Immunology, 66: 76-82.
96. Truneh, A., & Pearce, F. L. (1981). *Characteristics of and calcium requirements for histamine release from rat peritoneal mast cells treated with concanavalin A.* International Archives of Allergy & Applied Immunology, 66: 68-75.
97. Pearce, F. L., & Truneh, A. (1981). *Inhibition of histamine release from rat peritoneal mast cells treated with the ionophore A23187. Implications for the mode of action of anti-allergic compounds.* Agents & Actions, 11: 44-50.
98. Pearce, F. L., Ennis, M., Truneh, A., & White, J. R. (1981). *Role of intra- and extracellular calcium in histamine release from rat peritoneal mast cells.* Agents & Actions, 11: 51-4.
99. Ennis, M., Truneh, A., White, J. R., & Pearce, F. L. (1981). *Inhibition of histamine secretion from mast cells.* Nature, 289: 186-7.
100. Ennis, M., Truneh, A., & Pearce, F. L. (1981). *Lectin-induced histamine secretion from isolated rat and guinea pig mast cells.* Biochemical Pharmacology, 30: 2179-81.
101. Pearce, F. L., Atkinson, G., Ennis, M., Truneh, A., Weston, P. M., & White, J. R. (1980). *Effect of anti-allergic compounds on histamine release induced by basic agents, antigen, and the calcium ionophore A23187.* In J. Pepys & A. M. Edwards (Eds.), The Mast Cell: Its Role in Health and Disease (pp. 69-75). Tunbridge Wells: Pitman Medical Publishing Co.
102. Ennis, M., Truneh, A., White, J. R., & Pearce, F. L. (1980). *Calcium pools involved in histamine release from rat mast cells.* International Archives of Allergy & Applied Immunology, 62: 467-71.

---

#### Abstracts, Conference Proceedings and Reports

Over 120 abstracts, conference proceedings and reports

---

## Patents

1. *Lipid platinum complexes and methods of use thereof*. Dziewiszek, K. and Truneh, A.  
Patent #: [Provisional: 60/467,567]. (2003)
2. *PIGR-2, member of the immunoglobulin gene super-family*. Sweet, R., W, Truneh, A., and Wu, S.  
Europe. Patent #: EP0905237. (1999).  
Japan. Patent #: JP11215989. (1999).  
Japan. Patent #: JP2004000193. (2004).
3. *Anti-rank ligand monoclonal antibodies useful in treatment of rank ligand mediated disorders*. Tornetta, M., A, Sweet, R., W, Truneh, A., and Wattam, T., A. USA. Patent #: US20030211106. (2003).  
*Anti-rank ligand monoclonal antibodies useful in treatment of rank ligand mediated disorders*. Sweet, R., W., Tornetta, M., A., Truneh, A., and Wattam, T., A. World. Patent #: WO0215846. (2002).
4. *Hexameric fusion proteins and uses therefor*. Chaikin, M. A., Lyn, S. D. P., Sweet, R. W., and Truneh, A.  
USA. Patent #: US20020147326. (2002).  
Europe. Patent #: EP0975355. (2000).  
World. Patent #: WO9747732. (1997).
5. *Human tumor necrosis factor receptor-like 2 (TR2) antibodies*. Harrop, J. A., Holmes, S. D., Reddy, M. P., and Truneh, A.  
USA. Patent #: US20020102258. (2002).  
Europe. Patent #: EP1009431. (2000).  
World. Patent #: WO9851346. (1998).
6. *Method to identify substances which stimulate or inhibit the binding of TL2 (TRAIL) to TR5*. Young, P., R., Tan, K. B., Truneh, A., and Lyn, S. D. P.  
Europe. Patent #: EP0867509. (2002).
7. *Methods for treating cancers by stimulating dendritic cells or lymphomas with certain TNF molecules*. Costello, R., T., Morel, Y., Olive, D., Sweet, R., W., and Truneh, A.  
World. Patent #: WO0232463. (2002).
8. *Tumor necrosis factor related receptor, TR6*. Deen, K., C., Young, P., R., Marshall, L., A., Roshak, A., K., Tan, K., B., and Truneh, A.  
Europe. Patent #: EP1224274. (2002).  
USA. Patent #: US6313269. (2001).  
World. Patent #: WO0077191. (2000).
9. *DNA encoding tumour necrosis factor receptor TR6 - and corresponding polypeptide, antibody, agonist, antagonist, etc*. K.C. Deen; P.R. Young; L.A. Marshall; A.K. Roshak; K.B. Tan; A. Truneh  
Europe. Patent #: EP 870827.
10. *Tumor necrosis related receptor, TR4*. Emery, J., Tan, K. B., Truneh, A., and Young, P. R.  
Europe. Patent #: EP0861850. (2002).

11. *PIGR-1, a member of immunoglobulin gene superfamily*. Wu, S., Sweet, R. W., Truneh, A., and Hurle, M. R.  
USA. Patent #: US6020161. (2000).  
USA. Patent #: US6232441. (2001).  
Japan. Patent #: JP11225774. (1999).  
Europe. Patent #: EP0897981. (1999).
12. *Human LIG-1 homolog (HLIG-1)*. Wu, S., Sweet, R. W., and Truneh, A.  
USA. Patent #: US6046030. (2000).  
Japan. Patent #: JP11206391. (1999).  
Europe. Patent #: EP0913472. (1999).
13. *PIGRL-1, a member of immunoglobulin gene superfamily*. Wu, S., Sweet, R. W., and Truneh, A.  
USA. Patent #: US6114515. (2000).  
Japan. Patent #: JP11151094. (1999).  
Europe. Patent #: EP0905238. (1999).
14. *Tumor necrosis related receptor, TR5*. Young, P., R., Tan, K. B., Truneh, A., and Lyn, S. D. P.  
Europe. Patent #: EP0867509. (1998).  
Japan. Patent #: JP10313874. (1998).  
*Tumor Necrosis Factor Receptor-Associated Protein TR5*. Young, P., R., Tan, K. B., Truneh, A., and LYN, S. D., P.  
Japan. Patent #: JP2000078995. (2000).
15. *Tumor necrosis related receptor, TR4*. Emery, J., Tan, K. B., Truneh, A., and Young, P. R.  
Europe. Patent #: EP0861850. (1998).  
*DNA encoding tumor necrosis related receptor, TR4*. Emery, J., Tan, K., Truneh, A., and Young, P. R.  
USA. Patent #: US5885800. (1999).
16. *Marine compounds as HIV inhibitors*. Mai, S., Huey, Nagulapalli, V., Kumar, Patil, A., D., Truneh, A., and Westley, J., W. World. Patent #: WO9301193. (1993).
17. *Conformationally constrained peptides*. Bhatnagar, P., Kumar, Jarlais, R., Louise, Des, Dixon, J., Scott, Hendrickson, W., Arthur, Kopple, K., D., Kwong, P., Peishoff, C., Elizabeth, Ryu, S.-E., Truneh, A., and Sweet, R., W.  
World. Patent #: WO9209625. (1992).
18. *Method for the detection and measurement by fluorescence of a membrane-associated protein-dependent cell endocytosis*. Leserman, L. D., Truneh, A., Barbet, J., and Machy, P.  
World. Patent #: WO8403947. (1984).  
Europe. Patent #: EP0122201. (1984).  
France. Patent #: FR2544080. (1984).
19. *Novel Compounds (Bundled application on 10 novel polynucleotides and polypeptides)*. AGARWAL Pankaj, KABNICK Karen, LAI Ying-Ta, RIZVI Safia, SMITH Randall, TRUNEH Alemseged, XIANG Zhaoying.  
(U.S. serial no. 09/333,593 filed 22-Jun-00).



20. *Novel Compounds (Bundled application on 10 novel polynucleotides and polypeptides)*. AGARWAL Pankaj, BARONE Frank, FEILD John, KABNICK Karen, McQUENEY Michael S., RIZVI Safia, SMITH Randall, TRUNEH Alemseged, XIANG Zhaoying.  
(U.S. Filed 18-Apr-00).
  21. *SBhACRP30a (A Novel Human Adipocyte Complement Related Protein)*. Frank Barone, John Field, Karen Kabnick, Michael S. McQueney, Randall Smith, Alemseged Truneh, Pankaj Agarwal, Safia Rizvi, Zhaoying Xiang.  
(U.S. serial no. 60/182,172 filed 14-Feb-00).
  22. *L-85*. WU Sujian, KARIV Ilona, SWEET Raymond, TRUNEH Alemseged. GH70005P  
(U.S. serial no. 60/044,977 filed 29-Apr-97).
  23. *B 7.2-3.1*. KARIV Ilona, SWEET Raymond, TRUNEH Alemseged, WU Shujian.  
GH70004P  
(U.S. serial no. 60/044,979 filed 29-Apr-97).
  24. *A Novel Human Clone B71H2*. KARIV Ilona, SWEET Raymond, TRUNEH Alemseged.  
ATG50040  
(U.S. serial no. 08/785,425 filed 17-Jan-97)
-

**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

**BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☒ FADED TEXT OR DRAWING
- ☒ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☒ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☒ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.**